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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re application of: Kuo et al.

Application Serial No.: 10/718,192

Filed: November 20, 2003

For: **A HEAT SPREADER BALL GRID ARRAY (HSBGA) DESIGN FOR LOW-K INTEGRATED CIRCUITS (IC)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**CERTIFICATE UNDER 37 C.F.R. §3.73(b)  
ESTABLISHING RIGHT OF ASSIGNEE TO TAKE ACTION**

1. The assignee of the entire right, title and interest hereby seeks to take action in the PTO in this matter.

**IDENTIFICATION OF ASSIGNEE**

2. The assignee of this matter is:

**TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.**

8, Li-Hsin Rd. 6  
Hsinchu Science Park  
Hsinchu, Taiwan 300-77, R.O.C.

**PERSON AUTHORIZED TO SIGN**

3. Daniel R. McClure  
Attorney for Assignee

4. A chain of title from the inventor(s) to the current assignee is shown below:

- a. From: Yian-Liang KUO, Yung-Sheng HUANG, Yu-Ting LIN  
To: Taiwan Semiconductor Manufacturing Co., Ltd.  
Recorded in PTO: Reel: 01470      Frame: 0412
- b. From:  
To:  
Recorded in PTO: Reel:                      Frame:

### DECLARATIONS

5. I, the undersigned, have reviewed all the documents in the chain of title of the

☒ application  
☐ patent

matter identified above and, to the best of my knowledge and belief, title is in the assignee identified above.

6. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

7. I, the person signing below, aver that I am empowered to sign this statement on behalf of the assignee.



**Daniel R. McClure, Reg. No. 38,962**

Tel. No. 770-933-9500  
Customer No.: 24504

Docket No. 252016-1720

**THOMAS, KAYDEN, HORSTEMEYER  
& RISLEY, L.L.P.**  
100 Galleria Parkway, Suite 1750  
Atlanta, Georgia 30339-5948



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application:

Application No.: 10/718,192

Filed: 11/20/2003

Title: Heat spreader ball grid array (HSBGA) design for low-k integrated circuits (IC)

Reel/frame Number: 014740/0412

Commissioner for patents

Washington, D.C. 20231

**POWER OF ATTORNEY BY ASSIGNEE OF ENTIRE INTEREST**  
**(REVOCATION OF PRIOR POWERS)****REVOCATION OF PRIOR POWERS OF ATTORNEY**

the power of attorney previously given is hereby revoked, and

**NEW POWER OF ATTORNEY**

the following attorneys/agents are hereby appointed to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: I hereby appoint all attorneys of Thomas, Kayden, Horstemeyer & Risley, LLP, who are listed under the USPTO Customer Number shown below as the attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, recognizing that the specific attorneys listed under that Customer Number may be changed from time to time at the sole discretion of Thomas, Kayden, Horstemeyer & Risley, LLP, and request that all correspondence about the application be addressed to the address filed under the same USPTO Customer Number.

**24504**

Patent Trademark Office

Please direct all future correspondence and telephone calls to:


Daniel R. McClure, Reg. No. 38,962  
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.  
100 Galleria Parkway, Suite 1750  
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ASSIGNEE OF ENTIRE INTEREST  
TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.  
8, Li-Hsin Rd. 6  
Hsinchu Science Park  
Hsinchu, Taiwan 300-77, R.O.C.

**ASSIGNEE CERTIFICATION**

The certification under 37 C.F.R. §3.73(b) establishing the right of assignee to take action is attached hereto along with documentation evidencing same. Further, in my official position with Taiwan Semiconductor Manufacturing Company, Ltd., I am authorized to sign documents and otherwise act on its behalf in connection with the management and handling of patent applications and other intellectual property matters.

Date: August 13, 2004

  
Chien-Wei (Chris) Chou  
Director - Intellectual Property Division